PEARL HARBOR NAVAL SHIPYARD
PUBLIC AFFAIRS
667 Safeguard Street Suite 100
Pearl Harbor, Hawaii 96860
Phone: (808) 474-0272 Fax: (808) 474-0269

FOR IMMEDIATE RELEASE **October 19, 2009**

Pearl Harbor Naval Shipyard Docks Historic 'Mighty Mo'

By Katie Vanes
Pearl Harbor Naval Shipyard Public Affairs

PEARL HARBOR, Hawaii – With years of experience and the help of four tugboats, Pearl Harbor Naval Shipyard workers successfully maneuvered Battleship *Missouri* into Dry Dock 4 on Oct. 14. After the docking team pumped 54.3 million gallons of water out of the dock, *Missouri* settled on more than 300 strategically placed keel blocks as her gallant guns pointed toward the sunset. The 887-foot-long, 54,889-ton floating memorial will undergo $18 million worth of extensive repairs over the next three months while in dry dock in the Shipyard.

Best known for her "surrender deck" where Japanese officials signed documents ending World War II in the Pacific on Sept. 2, 1945, the "Mighty Mo" has spent the past 11 years at Pier Foxtrot 5 along Battleship Row in Pearl Harbor. The move began at 6:50 a.m. with the caisson in place at approximately 11 a.m. and was settled by 6:30 p.m. to end the day.

The movement from Pier Foxtrot 5 to Dry Dock 4 was planned by the Shipyard docking office, naval architects and the ships project team in conjunction with BAE Systems Ship Repair Hawaii and the USS *Missouri* Memorial Association, headed by President and Chief Executive Officer Michael Carr and retired Navy Vice Adm. Robert Kihune.

Shipyard civilian and military personnel were honored by the opportunity to work on such a historically significant battleship. "We take great pride that our shipyard is helping to preserve one of the greatest symbols of victory in World War II — the Battleship *Missouri*," said Shipyard Commander Capt. Gregory R. Thomas. "We trained hard, studied the challenges thoroughly and built a great Navy-contractor team ready to jump into action at first light."

Dockmaster Sonny Deltoro played a crucial role in the docking process by overseeing all planning and execution of the operation, including the preparation of pre-evolution briefs and docking schedules, monitoring safe movement of the vessel, and issuing effective communication throughout the maneuver.

"The Shipyard has done a lot of nontraditional work in the past, but nothing this monumental in the last 10 to 15 years," said Deltoro, whose team embraced the *Missouri* project and underwent specific training for docking the huge ship. "Our role was to get the boat in here safely."

Shipyard engineers carefully studied the unique design of *Missouri*'s hull configuration and shipwrights cut the wooden portion of the massive keel blocks, weighing four tons each, to support structural beams within reinforced sections of the hull, explained Naval Architect Jason Morrison. The transit was executed by four commercial tugboats; then workers docked the ship, meticulously situating it on the keel blocks in exactly the right position.

Docking *Missouri* was especially challenging for naval architects and engineers because the ship required considerable analysis, planning and specialization. For example, she needed a specialized keel block plan to allow for repainting of the ship in two dockings instead of the three usually required.

Additionally, the materials needed to plan the docking were 60 years old and needed revision in the preparation phase. Technological advances in docking had to be reworked into the planning. Yet another challenge workers overcame was the large number of blocks (300-plus for *Missouri* versus 86 blocks for the guided-missile cruiser USS *Port Royal*) and their precise configuration, which required one-inch placement accuracy as the blocks were set. Ultimately, *Missouri* is the largest ship ever positioned in the 1,088 foot-long, 255-foot wide Dry Dock 4, and took more than 100 men and women to man the lines.

The docking also paved the way for a new type of measurement technology for the Shipyard. *Missouri*'s dry-docking was the first time journeyworkers used a laser range finder tool to help position the ship's bow on the centerline of the keel blocks, according to Shipwright Debbie Aguiar, who has 30 years of experience docking ships at Pearl Harbor.

"This is the first opportunity we had to use the laser, and it was very successful," she said. "The *Missouri* docking proved that the Shipyard can use this new technology efficiently."

Aguiar further explained her emotional pride as well as the technical success. "When I stepped on her teak decks, I couldn't help but feel the history beneath my feet," she said. "We all have sentimental connections to objects in our lives. This is the feeling I get when looking around this battleship.

"I think of the people who served their country on it, and I feel that there is a presence much grander than myself. I tip my hardhat to our service men and women of today who are making the future history of our great nation, just as the men and women of yesterday made our history come alive for us in keeping our country safe."

Since the U.S. Navy donated *Missouri* to the USS *Missouri* Memorial Association in 1998, the battleship has become one of the state's tourism highlights (in the top 10 this year),

attracting a record-breaking 48,111 visitors in July alone. Mighty Mo's repair schedule was set to coincide with Hawaii's slow tourism season in the fall.

The projected completion date is Jan. 7, 2010, with the goal of resuming tours Jan. 29 in her usual spot at Ford Island's Foxtrot Pier 5, near the USS *Arizona* Memorial.

Pearl Harbor Naval Shipyard is the largest industrial employer in the state of Hawaii with a combined civilian and military workforce of about 4,800. It has an operating budget of $644 million, of which more than $426 million is payroll for civilian employees. The Shipyard, strategically located in the Pacific Ocean, is a full-service naval shipyard and regional maintenance center for the U.S. Navy's surface ships and submarines.

For more information on Pearl Harbor Naval Shipyard, visit http://www.phnsy.navy.mil.

-30-